Claims

1. A carbon nanotube dispersion liquid comprising a carbon nanotube, an amide-based polar organic solvent, and a polyvinylpyrrolidone (PVP).

2. A carbon nanotube dispersion liquid comprising a carbon nanotube, an amide-based polar organic solvent, a nonionic surfactant, and a polyvinylpyrrolidone (PVP).

3. The carbon nanotube dispersion liquid according to claim 1 or 2, characterized in that the amide-based polar organic solvent is N-methylpyrrolidone (NMP).

4. The carbon nanotube dispersion liquid according to claim 2 or 3, characterized in that the nonionic surfactant is a polyoxyethylene surfactant.

5. The carbon nanotube dispersion liquid according to claim 1, characterized by having a nonionic surfactant content of 0.005 to 5%.

6. The carbon nanotube dispersion liquid according to claim 1, characterized by having a polyvinylpyrrolidone (PVP) content of 0.1 to 10%.

7. The carbon nanotube dispersion liquid according to claim 1, characterized in that the polyvinylpyrrolidone (PVP) has a molecular weight of 20,000 to 5,000,000.

8. The carbon nanotube dispersion liquid according to claim 1, characterized in that the carbon nanotube is a

single-walled carbon nanotube (SWNT).

9. The carbon nanotube dispersion liquid according to claim 1, characterized by comprising as the carbon nanotube only fine carbon nanotube particles treated with a filter having a retaining particle size of 0.1 to 3.0 μm.

10. The carbon nanotube dispersion liquid according to claim 1, characterized in that the dispersion liquid is used for uniformly dispersing the carbon nanotube in a polymer-based nanocomposite.

11. The carbon nanotube dispersion liquid according to claim 1, characterized by having a reduced light scattering property.

12. A method for producing a carbon nanotube dispersion liquid, characterized by comprising the step of mixing and dispersing a carbon nanotube in a mixture solution of an amide-based polar organic solvent and a polyvinylpyrrolidone (PVP) under ultrasonication.

13. A method for producing a carbon nanotube dispersion liquid, characterized by comprising the steps of mixing and dispersing a carbon nanotube in a mixture solution of an amide-based polar organic solvent and a polyvinylpyrrolidone (PVP) under ultrasonication, and treating the resultant dispersion with a filter having a retaining particle size of 0.1 to 3.0 μm to obtain a dispersion liquid comprising only fine carbon nanotube particles.

14. A method for producing a carbon nanotube dispersion liquid, characterized by comprising the steps of mixing and dispersing a carbon nanotube in a mixture solution of an amide-based polar organic solvent and a nonionic surfactant under ultrasonication, and mixing the resultant dispersion with a polyvinylpyrrolidone (PVP).

15. A method for producing a carbon nanotube dispersion liquid, characterized by comprising the steps of mixing and dispersing a carbon nanotube in a mixture solution of an amide-based polar organic solvent and a nonionic surfactant under ultrasonication, mixing the resultant dispersion with a polyvinylpyrrolidone (PVP), and treating the dispersion with a filter having a retaining particle size of 0.1 to 3.0 μm to obtain a dispersion liquid comprising fine carbon nanotube particles.

16. A method for producing a carbon nanotube dispersion liquid, characterized by comprising the step of mixing and dispersing a carbon nanotube in a mixture solution of an amide-based polar organic solvent, a nonionic surfactant, and a polyvinylpyrrolidone (PVP) under ultrasonication.

17. A method for producing a carbon nanotube dispersion liquid, characterized by comprising the steps of mixing a carbon nanotube with a mixture solution of an amide-based polar organic solvent, a nonionic surfactant, and a polyvinylpyrrolidone (PVP) under ultrasonication, and

treating the resultant mixture with a filter having a retaining particle size of 0.1 to 3.0 μm to obtain a dispersion liquid comprising fine carbon nanotube particles.